

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	((HARUKAZU) near2 (KITAGAWA)).INV.	US-PGPUB; USPAT	AND	ON	2007/08/01 16:40
L2	2	((HARUKAZU) near2 (KITAGAWA)).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/08/01 16:42
L3	2	((SUMIKO) near2 (IHO)).INV.	EPO; JPO; DERWENT	AND	ON	2007/08/01 16:41
L4	2	((TAKASUMI) near2 (MATSUKI)).INV.	EPO; JPO; DERWENT	AND	ON	2007/08/01 16:41
L5	445	((SABURO) near2 (YAMAMOTO)).INV.	EPO; JPO; DERWENT	AND	ON	2007/08/01 16:41
L6	0	5 and (immunostimulatory or immunomodulatory) and oligonucleotide	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/08/01 16:42
L7	1	5 and (immunostimulatory or immunomodulatory)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/08/01 16:48
L8	4	("2003091593").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2007/08/01 16:48
L9	2	("20030091593").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2007/08/01 17:22
L10	7	GGGGGGGGGACGATCGTCG\$	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/08/01 17:23
L11	11	GGGGGGACGATCGTCG\$	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/08/01 17:23

L7 ANSWER 19 OF 20 USPATFULL on STN

IT 502778-55-4

(packaging of immunostimulatory substances and antigens into virus-like particles for use as vaccines against cancer, autoimmune disease, allergy and viral infection)

RN 502778-55-4 USPATFULL

CN DNA, d(P-thio)(G-G-G-G-G-G-G-G-G-A-C-G-A-T-C-G-T-C-G-G-G-G-G-G-G-G-G-G) (9CI) (CA INDEX NAME)

STRUCTURE DIAGRAM IS NOT AVAILABLE

ACCESSION NUMBER: 2003:145924 USPATFULL <<LOGINID::20070801>>

TITLE: Packaging of immunostimulatory substances into virus-like particles: method of preparation and use

INVENTOR(S): Bachmann, Martin, Winterthur, SWITZERLAND

Storni, Tazio, Viganello, SWITZERLAND

Maurer, Patrik, Winterthur, SWITZERLAND

Tissot, Alain, Zurich, SWITZERLAND

Schwarz, Katrin, Schlieren, SWITZERLAND

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Pumpens, Paul, Riga, LATVIA

Cielens, Indulis, Riga, LATVIA

Renhofa, Regina, Riga, LATVIA

PATENT ASSIGNEE(S): Cytos Biotechnology AG (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003099668	A1	20030529
APPLICATION INFO.:	US 2002-244065	A1	20020916 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-318994P	20010914 (60)
	US 2002-374145P	20020422 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W., SUITE 600, WASHINGTON, DC, 20005-3934	
NUMBER OF CLAIMS:	207	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	60 Drawing Page(s)	
LINE COUNT:	7907	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to the finding that virus like particles (VLPs) can be loaded with immunostimulatory substances, in particular with DNA oligonucleotides containing non-methylated C and G (CpGs). Such CpG-VLPs are dramatically more immunogenic than their CpG-free counterparts and induce enhanced B and T cell responses. The immune response against antigens optionally coupled, fused or attached otherwise to the VLPs is similarly enhanced as the immune response against the VLP itself. In addition, the T cell responses against both the VLPs and antigens are especially directed to the Th1 type. Antigens attached to CpG-loaded VLPs may therefore be ideal vaccines for prophylactic or therapeutic vaccination against allergies, tumors and other self-molecules and chronic viral diseases.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 20 OF 20 USPATFULL on STN

IT 502953-40-4

(antiviral and antitumor vaccines comprising anti-CD4 antibody or immunostimulatory nucleic acid and antigen-coupled virus-like particles)

for enhancement of immune responses and activation of  
antigen-presenting cells)  
RN 502953-40-4 USPATFULL  
CN DNA, d(P-thio)(G-G-G-G-G-G-G-G-G-G-G-A-C-G-A-T-C-G-T-C-G-G-G-G-G-G-G-G-G-  
G) (9CI) (CA INDEX NAME)

STRUCTURE DIAGRAM IS NOT AVAILABLE

ACCESSION NUMBER: 2003:133508 USPATFULL <<LOGINID::20070801>>  
TITLE: In vivo activation of antigen presenting cells for  
enhancement of immune responses induced by virus like  
particles  
INVENTOR(S): Bachmann, Martin F., Winterthur, SWITZERLAND  
Lechner, Franziska, Zurich, SWITZERLAND  
Storni, Tazio, Viganello, SWITZERLAND  
PATENT ASSIGNEE(S): Cytos Biotechnology AG (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003091593	A1	20030515
APPLICATION INFO.:	US 2002-243739	A1	20020916 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-318967P	20010914 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W., SUITE 600, WASHINGTON, DC, 20005-3934	
NUMBER OF CLAIMS:	194	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	20 Drawing Page(s)	
LINE COUNT:	6522	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to the finding that stimulation of antigen  
presenting cell (APC) activation using substances such as anti-CD40  
antibodies or DNA oligomers rich in non-methylated C and G (CpGs) can  
dramatically enhance the specific T cell response obtained after  
vaccination with recombinant virus like particles (VLPs) coupled, fused  
or otherwise attached to antigens. While vaccination with recombinant  
VLPs fused to a cytotoxic T cell (CTL) epitope of lymphocytic  
choriomeningitis virus induced low levels cytolytic activity only and  
did not induce efficient anti-viral protection, VLPs injected together  
with anti-CD40 antibodies or CpGs induced strong CTL activity and full  
anti-viral protection. Thus, stimulation of APC-activation through  
antigen presenting cell activators such as anti-CD40 antibodies or CpGs  
can exhibit a potent adjuvant effect for vaccination with VLPs coupled,  
fused or attached otherwise to antigens.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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(FILE 'HOME' ENTERED AT 15:30:20 ON 01 AUG 2007)

FILE 'CAPLUS' ENTERED AT 15:30:46 ON 01 AUG 2007

FILE 'STNGUIDE' ENTERED AT 15:33:30 ON 01 AUG 2007

FILE 'REGISTRY' ENTERED AT 15:45:06 ON 01 AUG 2007

L1 44 S GGGGGGGGGGACGATCGTCG/SQSN

FILE 'CAPLUS, USPATFULL' ENTERED AT 15:46:20 ON 01 AUG 2007

L2 17 FILE CAPLUS

L3                8 FILE USPATFULL  
           TOTAL FOR ALL FILES  
 L4               25 S L1  
 L5               12 FILE CAPLUS  
 L6               8 FILE USPATFULL  
           TOTAL FOR ALL FILES  
 L7               20 S L4 AND (IMMUNOSTIMULATORY OR IMMUNOMODULATING)

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COST IN U.S. DOLLARS

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

CA SUBSCRIBER PRICE

SINCE FILE	TOTAL
ENTRY	SESSION
67.87	101.82
SINCE FILE	TOTAL
ENTRY	SESSION
-9.36	-9.36

STN INTERNATIONAL LOGOFF AT 15:50:06 ON 01 AUG 2007